



## REDUCING IMPACTS OF THE WIND

Unprotected soil caught by the wind results in loss of topsoil, crop damage and sediment in road ditches and dust in the air— which can cause poor visibility on public roads and threaten the health of those with respiratory problems. Erosion by wind can be cut dramatically if the soil is covered or partially covered by vegetation.

*Key principles in reducing wind erosion are barriers to slow the wind and vegetative cover for the soil.*

### CROP RESIDUE

The non-harvested plant material left on the soil after crop harvest should be left undisturbed as long as possible. Called crop residue management or conservation tillage, this practice is a widely accepted farming practice helping reduce erosion from both wind and water.

### COVER CROPS

Cover crops are planted to cover the soil between cropping cycles to protect against both wind and water erosion. They are not harvested, but instead are turned under or left on the surface to decompose once their protective function is complete. Other benefits: they may cut fertilizer costs, reduce the need for pesticides, and increase crop yields by improving soil health. Cover crops planted to control wind erosion must be adapted to the site and grow fast to protect the soil quickly.

### WINDBREAKS/SHELTERBELTS

Windbreaks, sometimes called shelterbelts, reduce wind erosion by disrupting the wind flow and slowing the wind down. One or more rows of trees and/or shrubs planted perpendicular to the prevailing wind direction can protect crops and livestock,

offer habitat for wildlife, improve air quality, and manage snow. Choice of trees and shrubs, number of rows, planting direction, spacing within and between rows, and distance from the area to be protected all work to determine how effective your windbreak will be.

### VEGETATIVE WIND BARRIERS

Vegetative wind barriers — narrow strips of tall grass or other herbaceous vegetation growing perpendicular to the wind — function like small windbreaks. They're most often used to protect young crops from the wind. Like windbreaks, the way they function depends on their height, density and spacing. For optimum protection, these barriers should be spaced not more than 10-12 times their height apart. If annual plants are used, the barriers must be replanted each year.

## Trees and shrubs



Rows of trees and shrubs form windbreaks to protect farmstead buildings and livestock from harsh winter winds.

## living snow fence



This "living snow fence" of trees and shrubs in north-central Iowa provides protection for the highway from snow drifts in winter, and also adds diversity to the landscape and habitat for wildlife.

## air quality